

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions of the claims in the Application. With reference to the listing it is noted that, herewith, claims 1-20 are canceled without prejudice or disclaimer.

Listing of Claims

Claims 1-20 (Canceled)

21. (Original) A method for using a computer to transform information, comprising:

- identifying a source of data;
- identifying a source device format type from the source data, if possible;
- identifying the source device format type, if not already identified;
- identifying a target device format type;
- instantiating a source device format document based on the source device format type, if not already instantiated;
- instantiating a target device format document based on the target device format type, if not already instantiated;
- converting the source data for use in the source device format document, if necessary;
- identifying potential page elements from the source data;
- generating source page elements with identifying source tags within the source device format document, if source data is un-referenced by source page elements;
- populating source page elements with associated source data;
- applying attributes associated with the source page elements to the populated source data;

identifying page elements in the target device format type;

generating target page elements with identifying target tags corresponding to source page elements, if the source page elements have no corresponding target page elements;

transforming attributes associated with the generated target page elements according to attributes associated with the target device format document, if available, otherwise,

identifying transformation parameters for transforming target page elements based on the differences between the source device format type and target device format type, and

transforming attributes associated with the generated target page elements according to a the transformation parameters;

populating target page elements corresponding to source page elements with source data;
and

applying attributes associated with the target page elements to the populated source data.

22. (Original) The method of claim 21, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

23. (Original) The method of claim 21, wherein applied attributes include formatting information.

24. (Original) The method of claim 21, further comprising:

saving a device format document.

25. (Original) The method of claim 24, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

26. (Original) The method of claim 21, further comprising:

saving a composite document including a device format document, page elements, and

source data.

27. (Original) The method of claim 21, further comprising:

converting a composite document including a device format document, page elements, and source data into another document format.

28. (Previously Presented) A method for using a computer to transform information, comprising:

selecting a source of data;

identifying a source device format type from the source data, if possible;

identifying the source device format type, if not already identified;

instantiating a source device format document based on the source device format type, if not already instantiated;

converting the source data for use in the source device format document, if necessary;

identifying potential page elements from the source data;

generating, within the source device format document, source page elements with identifying source tags, if source data is un-referenced by source page elements;

populating source page elements with associated source data;

applying attributes associated with the source page elements to the populated source data.

29. (Original) The method of claim 28, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

30. (Original) The method of claim 28, wherein applied attributes include formatting information.

31. (Original) The method of claim 28, further comprising:

saving a device format document.

32. (Original) The method of claim 31, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

33. (Original) The method of claim 28, further comprising:

saving a composite document including a device format document, page elements, and source data.

34. (Original) The method of claim 28, further comprising:

converting a composite document including a device format document, page elements, and source data into another document format.

35. (Original) A method for using a computer to transform information, comprising:

identifying source page elements in a source device format document;

identifying a source device format type, if not already identified;

identifying a target device format type;

instantiating a target device format document based on the target device format type, if not already instantiated;

identifying page elements in the target device format type;

generating target page elements with identifying target tags corresponding to source page elements, if the source page elements have no corresponding target page elements;

transforming attributes associated with the generated target page elements according to attributes associated with the target device format document, if available, otherwise,

identifying transformation parameters for transforming target page elements based on the differences between the source device format type and target device format type, and

transforming attributes associated with the generated target page elements according to a

the transformation parameters;

populating target page elements corresponding to source page elements with data from the source page elements; and

applying attributes associated with the target page elements to the data in the populated target page elements.

36. (Original) The method of claim 35, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

37. (Original) The method of claim 35, wherein applied attributes include formatting information.

38. (Original) The method of claim 35, further comprising:
saving a device format document.

39. (Original) The method of claim 38, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

40. (Original) The method of claim 35, further comprising:
saving a composite document including a device format document, page elements, and source data.

41. (Original) The method of claim 35, further comprising:
converting a composite document including a device format document, page elements, and source data into another document format.

42. (Original) A system for using a computer to transform information, comprising:
means to identify a source of data;
means to identify a source device format type from the source data, if possible;

means to identify the source device format type, if not already identified;

means to identify a target device format type;

means to instantiate a source device format document based on the source device format type, if not already instantiated;

means to instantiate a target device format document based on the target device format type, if not already instantiated;

means to convert the source data for use in the source device format document, if necessary;

means to identify potential page elements from the source data;

means to generate source page elements with identifying source tags within the source device format document, if source data is un-referenced by source page elements;

means to populate source page elements with associated source data;

means to apply attributes associated with the source page elements to the populated source data;

means to identify page elements in the target device format type;

means to generate target page elements with identifying target tags corresponding to source page elements, if the source page elements have no corresponding target page elements;

means to transform attributes associated with the generated target page elements according to attributes associated with the target device format document, if available, otherwise using,

means to identify transformation parameters for transforming target page elements based on the differences between the source device format type and target device format type, and

means to transform attributes associated with the generated target page elements

according to a the transformation parameters;

means to populate target page elements corresponding to source page elements with source data; and

means to apply attributes associated with the target page elements to the populated source data.

43. (Original) The system of claim 42, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

44. (Original) The system of claim 42, wherein applied attributes include formatting information.

45. (Original) The system of claim 42, further comprising:

means to save a device format document.

46. (Original) The system of claim 45, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

47. (Original) The system of claim 42, further comprising:

means to save a composite document including a device format document, page elements, and source data.

48. (Original) The system of claim 42, further comprising:

means to convert a composite document including a device format document, page elements, and source data into another document format.

49. (Previously Presented) A system for using a computer to transform information, comprising:

means to select a source of data;

means to identify a source device format type from the source data, if possible;

means to identify the source device format type, if not already identified;

means to instantiate a source device format document based on the source device format type, if not already instantiated;

means to convert the source data for use in the source device format document, if necessary;

means to identify potential page elements from the source data;

means to generate, within the source device format document, source page elements with identifying source tags, if source data is un-referenced by source page elements;

means to populate source page elements with associated source data;

means to apply attributes associated with the source page elements to the populated source data.

50. (Original) The system of claim 49, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

51. (Original) The system of claim 49, wherein applied attributes include formatting information.

52. (Original) The system of claim 49, further comprising:

means to save a device format document.

53. (Original) The system of claim 52, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

54. (Original) The system of claim 49, further comprising:

means to save a composite document including a device format document, page elements,

and source data.

55. (Original) The system of claim 49, further comprising:

means to convert a composite document including a device format document, page elements, and source data into another document format.

56. (Original) A system for using a computer to transform information, comprising:

means to identify source page elements in a source device format document;

means to identify a source device format type, if not already identified;

means to identify a target device format type;

means to instantiate a target device format document based on the target device format type, if not already instantiated;

means to identify page elements in the target device format type;

means to generate target page elements with identifying target tags corresponding to source page elements, if the source page elements have no corresponding target page elements;

means to transform attributes associated with the generated target page elements according to attributes associated with the target device format document, if available, otherwise using,

means to identify transformation parameters for transforming target page elements based on the differences between the source device format type and target device format type, and

means to transform attributes associated with the generated target page elements according to a the transformation parameters;

means to populate target page elements corresponding to source page elements with data from the source page elements; and

means to apply attributes associated with the target page elements to the data in the

populated target page elements.

57. (Original) The system of claim 56, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

58. (Original) The system of claim 56, wherein applied attributes include formatting information.

59. (Original) The system of claim 56, further comprising:
means to save a device format document.

60. (Original) The system of claim 59, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

61. (Original) The system of claim 56, further comprising:
means to save a composite document including a device format document, page elements, and source data.

62. (Original) The system of claim 56, further comprising:
means to convert a composite document including a device format document, page elements, and source data into another document format.

63. (Original) A computer program stored on a computer readable medium, the program, comprising:

- a module to identify a source of data;
- a module to identify a source device format type from the source data, if possible;
- a module to identify the source device format type, if not already identified;
- a module to identify a target device format type;
- a module to instantiate a source device format document based on the source device

format type, if not already instantiated;

a module to instantiate a target device format document based on the target device format type, if not already instantiated;

a module to convert the source data for use in the source device format document, if necessary;

a module to identify potential page elements from the source data;

a module to generate source page elements with identifying source tags within the source device format document, if source data is un-referenced by source page elements;

a module to populate source page elements with associated source data;

a module to apply attributes associated with the source page elements to the populated source data;

a module to identify page elements in the target device format type;

a module to generate target page elements with identifying target tags corresponding to source page elements, if the source page elements have no corresponding target page elements;

a module to transform attributes associated with the generated target page elements according to attributes associated with the target device format document, if available, otherwise using,

a module to identify transformation parameters for transforming target page elements based on the differences between the source device format type and target device format type, and

a module to transform attributes associated with the generated target page elements according to a the transformation parameters;

a module to populate target page elements corresponding to source page elements with

source data; and

a module to apply attributes associated with the target page elements to the populated source data.

64. (Original) The medium of claim 63, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

65. (Original) The medium of claim 63, wherein applied attributes include formatting information.

66. (Original) The medium of claim 63, further comprising:

a module to save a device format document.

67. (Original) The medium of claim 66, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

68. (Original) The medium of claim 63, further comprising:

a module to save a composite document including a device format document, page elements, and source data.

69. (Original) The medium of claim 63, further comprising:

a module to convert a composite document including a device format document, page elements, and source data into another document format.

70. (Previously Presented) A computer program stored on a computer readable medium, the program, comprising:

a module to select a source of data;

a module to identify a source device format type from the source data, if possible;

a module to identify the source device format type, if not already identified;

a module to instantiate a source device format document based on the source device format type, if not already instantiated;

a module to convert the source data for use in the source device format document, if necessary;

a module to identify potential page elements from the source data;

a module to generate, within the source device format document, source page elements with identifying source tags, if source data is un-referenced by source page elements;

a module to populate source page elements with associated source data;

a module to apply attributes associated with the source page elements to the populated source data.

71. (Original) The medium of claim 70, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

72. (Original) The medium of claim 70, wherein applied attributes include formatting information.

73. (Original) The medium of claim 70, further comprising:

a module to save a device format document.

74. (Original) The medium of claim 73, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

75. (Original) The medium of claim 70, further comprising:

a module to save a composite document including a device format document, page elements, and source data.

76. (Original) The medium of claim 70, further comprising:

a module to convert a composite document including a device format document, page elements, and source data into another document format.

77. (Original) A computer program stored on a computer readable medium, the program, comprising:

a module to identify source page elements in a source device format document;

a module to identify a source device format type, if not already identified;

a module to identify a target device format type;

a module to instantiate a target device format document based on the target device format type, if not already instantiated;

a module to identify page elements in the target device format type;

a module to generate target page elements with identifying target tags corresponding to source page elements, if the source page elements have no corresponding target page elements;

a module to transform attributes associated with the generated target page elements according to attributes associated with the target device format document, if available, otherwise using,

a module to identify transformation parameters for transforming target page elements based on the differences between the source device format type and target device format type, and

a module to transform attributes associated with the generated target page elements according to a the transformation parameters;

a module to populate target page elements corresponding to source page elements with data from the source page elements; and

a module to apply attributes associated with the target page elements to the data in the

populated target page elements.

78. (Original) The medium of claim 77, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

79. (Original) The medium of claim 77, wherein applied attributes include formatting information.

80. (Original) The medium of claim 77, further comprising:
a module to save a device format document.

81. (Original) The method of claim 80, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

82. (Original) The medium of claim 77, further comprising:
a module to save a composite document including a device format document, page elements, and source data.

83. (Original) The medium of claim 77, further comprising:
a module to convert a composite document including a device format document, page elements, and source data into another document format.

84. (Original) An information transformation apparatus, comprising:
a processor;
a memory, communicatively connected to the processor;
a program, stored in the memory, including,

a module to identify a source of data;

a module to identify a source device format type from the source data, if possible;

a module to identify the source device format type, if not already identified;

a module to identify a target device format type;

a module to instantiate a source device format document based on the source device format type, if not already instantiated;

a module to instantiate a target device format document based on the target device format type, if not already instantiated;

a module to convert the source data for use in the source device format document, if necessary;

a module to identify potential page elements from the source data;

a module to generate source page elements with identifying source tags within the source device format document, if source data is un-referenced by source page elements;

a module to populate source page elements with associated source data;

a module to apply attributes associated with the source page elements to the populated source data;

a module to identify page elements in the target device format type;

a module to generate target page elements with identifying target tags corresponding to source page elements, if the source page elements have no corresponding target page elements;

a module to transform attributes associated with the generated target page elements according to attributes associated with the target device format document, if available, otherwise using,

a module to identify transformation parameters for transforming target page elements based on the differences between the source device format type and target device format type, and

a module to transform attributes associated with the generated target page elements according to a the transformation parameters;

a module to populate target page elements corresponding to source page elements with source data; and

a module to apply attributes associated with the target page elements to the populated source data.

85. (Original) The apparatus of claim 84, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

86. (Original) The apparatus of claim 84, wherein applied attributes include formatting information.

87. (Original) The apparatus of claim 84, further comprising:

a module to save a device format document.

88. (Original) The apparatus of claim 87, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

89. (Original) The apparatus of claim 84, further comprising:

a module to save a composite document including a device format document, page elements, and source data.

90. (Original) The apparatus of claim 84, further comprising:

a module to convert a composite document including a device format document, page elements, and source data into another document format.

91. (Previously Presented) An information transformation apparatus, comprising:

a processor;

a memory, communicatively connected to the processor;

a program, stored in the memory, including,

- a module to select a source of data;
- a module to identify a source device format type from the source data, if possible;
- a module to identify the source device format type, if not already identified;
- a module to instantiate a source device format document based on the source device format type, if not already instantiated;
- a module to convert the source data for use in the source device format document, if necessary;
- a module to identify potential page elements from the source data;
- a module to generate, within the source device format document, source page elements with identifying source tags, if source data is un-referenced by source page elements;
- a module to populate source page elements with associated source data;
- a module to apply attributes associated with the source page elements to the populated source data.

92. (Original) The apparatus of claim 91, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

93. (Original) The apparatus of claim 91, wherein applied attributes include formatting information.

94. (Original) The apparatus of claim 91, further comprising:

- a module to save a device format document.

95. (Original) The apparatus of claim 94, wherein saving a device format document also

saves document formatting to a collection of associated device format documents.

96. (Original) The apparatus of claim 91, further comprising:

a module to save a composite document including a device format document, page elements, and source data.

97. (Original) The apparatus of claim 91, further comprising:

a module to convert a composite document including a device format document, page elements, and source data into another document format.

98. (Original) An information transformation apparatus, comprising:

a processor;

a memory, communicatively connected to the processor;

a program, stored in the memory, including,

a module to identify source page elements in a source device format document;

a module to identify a source device format type, if not already identified;

a module to identify a target device format type;

a module to instantiate a target device format document based on the target device format type, if not already instantiated;

a module to identify page elements in the target device format type;

a module to generate target page elements with identifying target tags corresponding to source page elements, if the source page elements have no corresponding target page elements;

a module to transform attributes associated with the generated target page elements according to attributes associated with the target device format document, if available, otherwise using,

a module to identify transformation parameters for transforming target page elements based on the differences between the source device format type and target device format type, and

a module to transform attributes associated with the generated target page elements according to a the transformation parameters;

a module to populate target page elements corresponding to source page elements with data from the source page elements; and

a module to apply attributes associated with the target page elements to the data in the populated target page elements.

99. (Original) The apparatus of claim 98, wherein the generated source page elements with identifying source tags within the source device format document are based on the identified potential page elements.

100. (Original) The apparatus of claim 98, wherein applied attributes include formatting information.

101. (Original) The apparatus of claim 98, further comprising:

a module to save a device format document.

102. (Original) The apparatus of claim 101, wherein saving a device format document also saves document formatting to a collection of associated device format documents.

103. (Original) The apparatus of claim 98, further comprising:

a module to save a composite document including a device format document, page elements, and source data.

104. (Original) The apparatus of claim 98, further comprising:

a module to convert a composite document including a device format document, page

elements, and source data into another document format.